

ABSTRACT

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The invention relates to ethylene polymers that are modified by ionizing radiation, prior to article formation, at a temperature less than the crystalline melt temperature and preferably under ambient atmosphere, as well as articles made from said polymers. The irradiated ethylene polymers exhibit enhanced melt strength, tensile strength, impact resistance, tear strength, adhesion to polar substances and thermal stability, decreased elongation, and lower melt flow index, but are easily processed and converted into and onto articles by conventional technologies including injection molding, extrusion, film and bottle blowing and powder coating.